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9 **STATE OF CALIFORNIA**
10 **NATURAL RESOURCES AGENCY**
11 **DEPARTMENT OF CONSERVATION**
12 **DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES**
13

14 **EMERGENCY ORDER TO**
15 **IMMEDIATELY CEASE INJECTION OPERATIONS**
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19 **NO. 1064**

20 **August 18, 2014**

21 **Operator: Macpherson Oil Co.**

22 **Well API No.: 02918114**
23

24 **BY**

25 **Steven R. Bohlen**

26 **STATE OIL AND GAS SUPERVISOR**
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INTRODUCTION

1. The Division of Oil, Gas, and Geothermal Resources (Division) has determined that an emergency exists in connection with underground injection operations for the wells operated by Macpherson Oil Co., API no. 02918114 (hereinafter "the well subject to this order"). Injection into this well poses danger to life, health, property, and natural resources. Therefore, under the authority of Public Resources Code sections 3106, 3222, 3224, 3225, 3226, and 3235, and California Code of Regulations, title 14, sections 1724.6, 1724.7, 1724.10, the State Oil and Gas Supervisor (Supervisor) is ordering that injection into the well subject to this order immediately cease as specified below. The Division is working cooperatively with the Central Valley Regional Water Quality Control Board, (which is issuing its own order pursuant to California Water Code section 13267), and the State Water Resources Control Board to obtain information for use in evaluating, preserving and protecting underground water suitable for irrigation or domestic purposes.

2. This order constitutes written notice from the Division to immediately stop injection in the well subject to this order, pursuant to California Code of Regulations, title 14, section 1724.10, subdivision (h).

STATUTORY and RELATED AUTHORITY

3. Pursuant to Public Resources Code section 3106, the Supervisor shall supervise the operation of wells in this State so as to prevent, as far as possible, damage to life, health, property, and natural resources, and to prevent damage to underground waters suitable for irrigation and domestic purposes by the infiltration of, or the addition of, detrimental substances.

4. Pursuant to Public Resources Code sections 3222, 3224, 3225, 3226, 3235, and other authorities, the Supervisor has a duty to, and may take action to, prevent the infiltration of detrimental substances into underground water potentially suitable for irrigation or domestic purposes. Pursuant to these statutes and authorities, the Supervisor may order tests to be performed, remedial action(s) to be taken, and the preparation of reports regarding such tests and/or remedial action(s).

5. Pursuant to Title 14, California Code of Regulations, sections 1724.6, 1724.7, 1724.10, and other authorities, the Division may approve and evaluate Underground Injection and Disposal projects, and to require that data be submitted in connection therewith.

6. Pursuant to Title 14, California Code of Regulations, section 1724.10, subdivision (h), underground injection operations shall be stopped upon written notice from the Division.

FACTS

7. The well subject to this order is subject to the permitting authority of the Supervisor and/or Division pursuant to Public Resources Code section 3106, and Title 14, California Code of Regulations section 1724.6.

8. Such permitting authority is also contemplated by the federal Safe Drinking Water Act and its implementing regulations, and the Memorandum of Agreement between the Division and the United States Environmental Protection Agency. Effective March 14, 1983, California's Division of Oil, Gas and Geothermal Resources (Division) was granted primacy by the United States Environmental Protection Agency (US EPA) to carry out the terms of an Underground Injection Control Program, pursuant to section 1425 of the Safe Drinking Water Act (codified at 42 U.S.C. § 300f et seq.). (48 Fed. Register 6336, Feb. 11, 1983.)

9. As a result of the granting of primacy, the Division, pursuant to Title 14, California Code of Regulations sections 1724.6, 1724.7, and 1724.10, must approve any subsurface injection or disposal activities based on pertinent and necessary data submitted to the Division.

10. The Division has become aware that certain underground injection activities are occurring into underground waters inappropriate for receiving injection.

11. Based on information and belief, the Division has determined that the well subject to this order is injecting into one or more aquifers which:

- (a) May contain underground water suitable for irrigation or domestic purposes;
- (b) May contain water with less than 3,000 ppm total dissolved solids;
- (c) May not have been hydrocarbon-bearing at the time injection commenced; and

1 (d) May be an underground source of drinking water or otherwise protected water under the
2 Safe Drinking Water Act and associated authorities.

3 12. In order to prevent the infiltration of detrimental substances into underground water suitable
4 for irrigation or domestic purposes, the Supervisor relies on the above-referenced legal authorities and
5 factual allegations, and makes the orders set forth below.

7 **ORDERS**

8 13. Based on the facts, circumstances, and authorities described herein, on information and
9 belief, and pursuant to the Supervisor's duties set forth in Public Resources Codes section 3106,
10 pursuant to Public Resources Code section 3222, 3224, 3225, 3226, and 3235 the Supervisor has
11 determined that an emergency exists and that immediate action is necessary to protect life, health,
12 property, and natural resources, specifically, the further degradation of the affected aquifer(s), and
13 orders as follows:

14 **I. Cease and Desist Injection Operations**

15 14. The operator will cease all injection operations into the well subject to this order on or
16 before 12:00 Noon on Saturday, August 23, 2014 unless and until the Supervisor notifies the operator
17 in writing that injection operations may resume.

18 **II. Alternative Disposal or Injection**

19 15. In the event that production activities relying on the use of the well subject to this order are
20 continued using an alternative method of disposal of fluid, or an alternative location of underground
21 injection, such alternative disposal or injection method or location shall be utilized only pursuant to, as
22 applicable, (a) any applicable waste discharge requirements or NPDES permit issued by the Central
23 Valley Regional Water Quality Control Board; (b) an existing permit for Underground Injection into an
24 "exempted aquifer" consistent with Title 40, Code of Federal Regulations, section 146.3, updated to
25 reflect the addition of the new injectate as required by Title 14 of the California Code of Regulations,
26 section 1724.10, subdivision (d); or (c) other means carried out in full compliance with any required
27 laws or regulations.

III. Written Approval Required

16. Injection operations shall not resume into the well subject to this order except on the express written approval of the Supervisor.

IV. Provide Information

17. The operator subject to this order will provide the following information to the State Oil and Gas Supervisor, in compliance with the truthful and accurate reporting requirement of Public Resources Code section 3236, within 30 days of the date of this order:

(a) For each well subject to this order, any and all information compiled or maintained, whether or not previously submitted to the Division, in compliance with Title 14, California Code of Regulations, section 1724.7. The information submitted in response to this aspect of this order shall include, but not be limited to, the categories of information listed in Exhibit A attached hereto;

(b) For each well subject to this order, the total volume of injected fluid for each month of operation, for all years of operation, any periodic chemical analyses of the fluid(s) being injected, and any amendments to the original project approval, as provided by Division reporting requirements;

(c) For each well subject to this order, a technical report with an analysis of a representative sample of the fluid being injected, in accordance with the water quality analysis and reporting requirements contained in Exhibit B to this order;

(d) For each well subject to this order, any and all data maintained in compliance with Title 14, California Code of Regulations, section 1724.10, subd. (h);

(e) For each well subject to this order, the dates of, and documentation associated with, each mechanical integrity test undertaken to comply with Title 14, California Code of Regulations, section 1724.10, subd. (j);

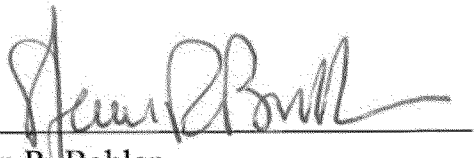
(f) For each well subject to this order, please also send copies of all of the data required in items (a) through (e) above to **Central Valley Water Board, Attn. Dane Johnson, 1685 E Street, Fresno, CA 93706**

Operator's Appeal Rights

18. This order may be appealed by filing a written notice of appeal with the State Oil and Gas

1 Supervisor or district deputy stating that the order is not acceptable within ten (10) days of service of
2 this order. This is an emergency order issued pursuant to Public Resources Code section 3226 and
3 therefore, pursuant to Public Resources Code section 3350, subdivision (b), **the filing of an appeal of**
4 **this emergency order shall not operate as a stay of this order.**

5
6 DATE August 18, 2016

7 By 
8 Steven R. Bohlen
9 State Oil and Gas Supervisor

10 CERTIFIED MAIL NO. 7013 2250 0000 9010 1243
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Exhibit A

Paragraph 19(a) of this order requires submission of the categories of information listed below. Specifically, your submission will include the following in spreadsheet form, labeled with the capital letters indicated, with attachments containing the backup documentation indicated in items Q through S, inclusive:

- A. The name of the owner and/or operator of the injection well;
- B. American Petroleum Institute (API) number for the injection well;
- C. Injection well name and number;
- D. Name of the field in which the well is located;
- E. County in which the well is located;
- F. Latitude and Longitude (decimal degrees) of well head location;
- G. Latitude and Longitude Datum, indicate "1" for North American Datum of 1983 or "2" for North American Datum of 1927;
- H. Injection well total depth (feet);
- I. Top injection depth (feet);
- J. Formation/Zone name at top injection depth;
- K. Bottom injection depth (feet);
- L. Formation/Zone name at bottom injection depth;
- M. Date injection started in the well (Day/Month/Year, xx/xx/xxxx);
- N. Identify and describe all sources of fluid injected into the well;
- O. Injection volume in barrels for the period from 1 June 2013 through 31 May 2014;
- P. Total injection volume in barrels from the date injection in the well began through 31 May 2014;
- Q. Attach well construction diagram including all perforations, annular material, and seals;
- R. Attach copies of all available water quality lab analyses and/or reports of the injected fluids;
- S. Attach a calculation of the average water quality of injected fluid from the date injection began through 31 May 2014;

Exhibit B

Paragraph 19(c) of this order requires a technical report with an analysis of a representative sample of the fluid being injected into each well subject to this order. Such sampling and reporting will reflect the following:

Sampling

Injection fluid samples shall be analyzed by a laboratory certified by the Environmental Laboratory Accreditation Program, using current applicable EPA-approved analytical methods for water for the following:

- A. Total dissolved solids
- B. Metals listed in California Code of Regulations, title 22, section 66261.24, subdivision (a)(2)(A)
- C. Benzene, toluene, ethylbenzene, and xylenes
- D. Total petroleum hydrocarbons for crude oil
- E. Polynuclear aromatic hydrocarbons (including acenaphthene, acenaphthylene, anthracene, benzo[a]anthracene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[a]pyrene, benzo[g,h,i]perylene, chrysene, dibenzo[a,h]anthracene, fluoranthene, fluorene, indeno[1,2,3-cd]pyrene, naphthalene, phenanthrene, and pyrene)
- F. Radionuclides listed under California Code of Regulations, title 22, Table 64442
- G. Methane
- H. Major and minor cations (including sodium, potassium, magnesium, and calcium)
- I. Major and minor anions (including nitrate, chloride, sulfate, alkalinity, and bromide)
- J. Trace elements (including lithium, strontium, boron, iron, and manganese)

Water Quality Reporting

Water quality information shall be submitted in a technical report that includes, at a minimum:

- A. Site plan with location(s) of representative sample(s).
- B. Description of field sampling procedures.
- C. Table(s) of analytical results organized by well number (including API number).
- D. Copies of analytical laboratory reports, including quality assurance/quality control procedures and analytical test methods.
- E. Waste management and disposal procedures.